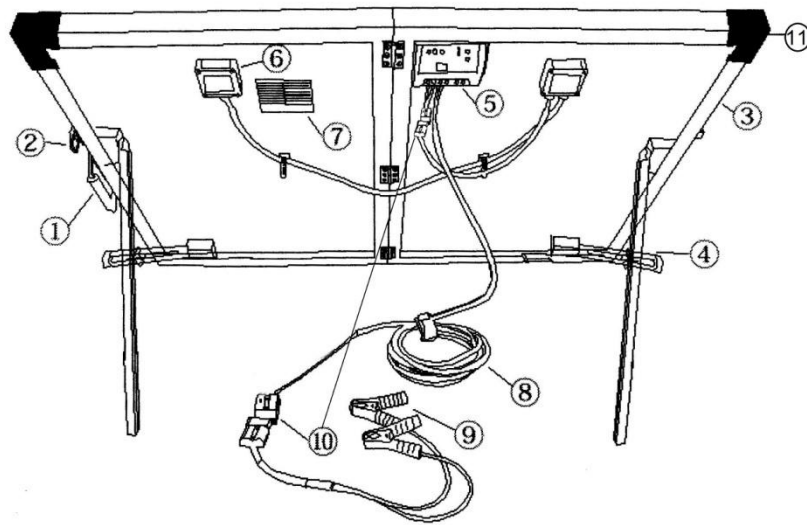


# FOLDING SOLAR PANEL KIT USER MANUAL



## Accessories

- |                            |                        |
|----------------------------|------------------------|
| 1. Handle                  | 7. Label               |
| 2. Latches                 | 8. Cable               |
| 3. Aluminium Frame         | 9. Battery Clips       |
| 4. Aluminium Support Legs  | 10. Anderson Plugs     |
| 5. Solar Charge Controller | 11. Protective Corners |
| 6. Junction Box            | 12. Storage Carry Bag  |

## Installation

1. Remove the solar panel kit from the handy carry bag.
2. Unclip the two latches on the side of the unit and fold two panels outward. Extend the two legs to the desired angle and lock in position to gain maximum support.
3. Place solar panel kit in the position facing the sun free from over hanging branches or obstructions.
4. Fully extend battery lead and connect to solar charger controller. Connect the battery clips to the + positive (red) & - negative (black) battery terminals. Ensure that the connection is secure.

**Note: To obtain maximum output it is suggested that the solar panel kit direction be frequently adjusted to track the suns movement throughout the day.**

## Operation LEDs

### Charging Status indicator

GREEN ON whenever sunlight is available for battery charging

### Battery Status indicator

GREEN ON when battery voltage is in normal range Charged

ORANGE ON when battery under voltage under full charge

RED ON when battery over discharged (flat)

## FREQUENTLY ASKED QUESTIONS

Q. What type of batteries can be used with the kit?

A. Factory set for AGM Batteries, but will charge Gel & Flood Batteries too.

Q. Will the solar panels over charge my battery.

A. The charge regulator ensures that a steady charge is supplied to the battery and will not be over charged. It has three stages of charging Bulk, Absorb and Float.

Q. Can I extend/lengthen the battery lead?

A. If the lead is extended this could result in a loss of voltage and insufficient power transferred from the solar panels to charge the battery. Quality wire should always be used to extend the lead length.

Q. Is the Controller water resistant.

A. Yes but it is recommended during rain, hail or storms the kit be moved indoors to protect it.

Q. How do I clean the solar panel?

A. Dust & dirt should firstly be swept off the panel surface using a soft brush and then use a wet cloth to wipe the panel surface to remove remaining dirt & grime. It is recommended that any bird droppings be removed as soon as possible as if left can cause damage to the surface.

## Trouble shooting if system does not function

Check all connections to ensure they are secure and free from moisture & debris.

Check the solar panels are in good sunlight.

Test the battery the solar kit is hooked to, to ensure it is not faulty.

Disconnect the solar kit from the battery wait 30 seconds and reconnect. This will restart the solar controller.

To test if your kit is working, check the battery voltage before you connect the solar kit to it. Then connect the solar kit and leave it on for 10 minutes, then check the voltage in your battery. The battery voltage would now be higher than your first reading if the kit is working correctly.

If problems continue please consult your place of purchase.

### PV Array Short Circuit

If PV array short circuit occurs, clear it to resume normal operation.

### Load Short Circuit

Fully protected against load wiring short-circuit. After one automatic load reconnect attempt, the fault must be cleared by reapply power.

### Battery Reverse Polarity

Full protection against battery reverse polarity, no damage to the controller will result. Disconnect the wires from the battery and reconnect making sure the positive lead is connected to the positive terminal on the battery and the negative lead is connected to the negative on the battery.

### Overheating Protection

If the temperature of the controller heat sink exceeds 85°C, the controller will automatically start the overheating protection.

It is recommended to move the solar kit indoors during rain, hail or storms.

## Folding Solar Charging System Specification

Specifications						
Type	Module Size	N.W.	Max Power	Max Power Voltage	Max Power Current	Open-Circuit Voltage
Module	mm	kg	W	V	A	V
2 x 40W	765x415x50	10.5	80	18	4.44	21.60
2 x 60W	760x505x70	14	120	18	6.98	21.60
2 x 80W	1005x505x70	16.5	160	18	8.88	21.60
2 x 100W	1005x670x70	18	200	18	11.12	21.60

### Solar Cell: Monocrystalline

**WARNING: DO NOT CHARGE A BATTERY DIRECT FROM THE SOLAR PANELS, THERE MUST BE A REGULATOR USED.**